MARKET BRIEF - SINGAPORE'S HEALTHCARE AND CLINICAL LABORATORIES AND TESTING MARKET

1. Name of Country / Region : Singapore, South East Asia (ASEAN)

a. Total population : 4.0 million (3.4 million Singapore residents, the rest

are foreigners residing in Singapore)

b. % having access to quality healthcare: almost 100%

2. Who Pays for Healthcare ?:

Healthcare is financed through a mix of out-of-pocket expenses, government subsidy and insurance, which can be paid for by the individual or by the patient's employer.

Singapore has a hybrid healthcare financing framework based on two key principles: - individual responsibility and community and government support for those in need. The "Medisave" is a plan where a working person is mandated by law to set aside 6-8% of their income into a state-managed account which can be used to pay for hospitalization and long-term care expenses incurred by or their immediate family. "Medishield" is a national health insurance plan designed for major or prolonged illnesses, with a strong co-payment element.

a. <u>Government</u>: The government may subsidize up to 80% of costs depending on the illness and healthcare plan.

b. Private Insurance: Most residents buy private insurance but more as an

add-on feature to their existing healthcare plan under the "Medisave" plan. Some corporations pay for their employees' basic healthcare and hospitalization plan. These plans vary from company to company and for

different categories of staff.

c. <u>Patients Themselves</u>: Their out-of-pocket expenses depend on the illness they are seeking treatment for and whether they choose for the highly-subsidized government healthcare. If patients opt for private healthcare, then the fees are determined by the private healthcare provider which are higher than that of government healthcare providers.

3. Number of testing facilities

There are approximately 80 clinical laboratories located throughout Singapore. This total includes laboratories in both private and public hospitals, in clinics and polyclinics and independent chain laboratories.

Website: http://www.moh.gov.sg/corp/est/clinicallabs/clinical.do

- a. Hospitals
 - i. <u>Public / Government</u> All 16 public hospitals and specialty centers have dedicated clinical laboratories.
 - ii; <u>Private</u> The largest private hospital chain has its own medical laboratory and services all three of its hospitals. Parkway Laboratory Services is also the first medical laboratory in Asia with the ISO 9002 International Quality Certification. The other three private hospitals also have their own laboratories.
- b. <u>Independent Laboratories</u> There are approximately 18 medical laboratories, including managed chain laboratories.
- c. <u>Physician Offices</u> Blood and point-of-care tests are generally done at doctor/physician's clinics and where required, the blood and tissue samples are sent to the independent laboratories for reading. For standard tests, the results can be available within 24 hrs, and the patient returns to the doctor's clinic for a follow-up appointment. Private clinics are located throughout Singapore and serve the needs of the general population. 80% of the primary healthcare services are provided by these private / general practitioners. There are approximately 5200 doctors in Singapore with 50% of them in private practice and 42% are trained specialists. The doctor-patient ratio is 1:730.
- d. Pharmacies-There are currently 180 pharmacies located throughout the island. The major chain pharmacies are Guardian (100 outlets), Unity Healthcare (35 outlets) and polyclinic (government) pharmacies located in public hospitals and polyclinics. Distributors who sell to laboratory end-users also service the pharmacy chain market.
- e. Others Non-For-Profit Organizations such as Voluntary Welfare Organizations (VWOs), are also classified as charities and thus are allowed to embark on charity drives to raise funds. An example of an active charity is the National Kidney Foundation which runs a very successful health screening program targeting the general population. In addition, the Singapore Anti-Tuberculosis Association, which apart from specializing in x-rays, also offer complete health checks as does the Breast Cancer Foundation.

Another area that has been identified as a possible distribution channel is the Traditional Chinese Medicine (TCM) sector. Some medical halls carry out point-of-care tests for their patients but they have to be licensed.

Brands/Products are available in the Singapore Market

Biochem Immunosystems, Biomerieux, Beckman Coulter, Baxter Healthcare, Bio-Rad, DPC, Roche Diagnostics, Tyco Healthcare, Fischer Scientific, Johnson & Johnson, R-Biopharm, AB Biodisk, Abbott Diagnostics, Abbott/I-Stat, Axis-Shield, Ameritek, Acros, Binax, ABX Menatologie, Arkray, Awareness, Bayer, BD, Beckman Coulter, Biochemical Systems, Bionet, Dade Behring, Dako, Diagnostica Stago, Streck, Diasorin, Diasys, Elken, Eagle Diagnostics, Eppendorf, Hemocue, Heraeus Instruments-Kendro, Genelabs Diagnostics, Innogentics, Invitrogen, Instrumentation Lab, International Technidyne, Medonic, Mast Diagnostics, Medica, Meridian, Melet Schloesing, Merck Diagnostics, Nova Biomedical, Metertech, Nihon Kohden, Olympus, Omega Diagnostics, Otto Bock, Orion Diagnostics, Phamatechm, Panbio, Remel, Randox, , Quidel, Shimadzu, Sigma Diagnostics, Stanbio Lab, Sysmex, Vital Scientific, Wako, Whatman, 3M,

Other Supporting Information

General Background on Singapore's Healthcare System

Singapore's healthcare system is considered to be world-class. Singapore combines excellent healthcare infrastructure, the availability of skilled medical professional and the latest medical technology which has enabled the island city state to be considered the healthcare services hub in Asia. There are a total of 26 public and private hospitals and 6 national specialty centers, providing a complete spectrum of clinical services from basic health screening to complex quaternary care. The public sector accounts for 80% of the market while the private sector handles 20%. Singapore's public hospitals and specialty centers engage in clinical research with the many pharmaceutical, biotechnology and medical technology companies based in Singapore. Patients are able to get early access to state-of-the-art medicine and new treatment protocols for their medical conditions. This allows Singapore to remain on the cutting-edge in its healthcare service delivery.

Singapore's goal is to become Asia's premier healthcare hub by attracting foreign patients. In 2002, approximately 210,000 foreign patients sought treatment in Singapore. Singapore's target is to grow this to 1 million by 2012.

Some background on Singapore's Research Institutes and Partners

The Singapore government has identified the biomedical sciences as an industry growth area. Singapore now offers rich biomedical R&D capabilities through its public research institutions. From genomics, molecular biology and bio-processing to bioinformatics and bioengineering, each of the five institutes is dedicated to support the industry by conducting niche areas of research. Singapore's Biomedical Research Council (BMRC) under the Agency for Science, Technology ad Research (A*STAR) oversees all five research institutes. This vital research infrastructure is complemented by the local universities, hospitals and specialty centers.

Singapore was hit by SARS (Severe Acute Respiratory Syndrome) in March 2003 together with other countries in the region such as China, Hong Kong and Vietnam. The SARS epidemic infected over 200 people and claimed 32 lives. While Singapore's healthcare providers and all other relevant offices were praised for their multi-faceted approach at containing the disease, Singapore researchers were at the same time working at the development of a test kit to detect SARS. This breakthrough was accomplished by Genelabs Diagnostics, a Singapore company focusing on the development and manufacture of diagnostic test tools of infectious diseases in humans, and the government's Institute of Molecular and Cell Biology (IMCB). The kit, which was able to detect SARS in less than 15 minutes, tests for antibodies in people who have contracted SARS with an accuracy higher than 99%, and it works like a pregnancy test kit.

Health Status

<u>Diabetes</u> is the direct cause of one in 12 deaths in Singapore from heart disease and one in 17 deaths from stroke. Based on estimates by the World Health Organization, the incidence of diabetes in Singapore is set to go up from the current 8 percent of the population, to 17 percent by 2030. This would make it the Asian country with the highest rate of diabetes, a position currently held by South Korea. This increase is partly due to the rapidly aging population. Older people are more likely to suffer from diabetes and other chronic diseases.

The incidence of <u>heart disease</u> is 76 per 100,000. Heart Attacks account for 25% of all deaths in Singapore. Also, 29 deaths out of every 100,000 are a result of a stroke.

<u>Cancer</u> is the biggest killer in Singapore. The five most common cancers in Singapore are colorectal, lung, stomach, liver and nasopharynx. Colorectal cancer is the most common cancer in Singapore with approximately 1200 new cases diagnosed every year. Colorectal cancer cases have more than tripled in the last 30 years. Breast cancer is the most common form of cancer affecting women in Singapore, claiming about 250 lives annually. 1 in every 5 cancers occurring in Singaporean women is breast cancer. 1 out of every 20 women in Singapore will be diagnosed with breast cancer in their lifetime. Since 2000, between 700 and 1,000 new cases have been diagnosed each year. The incidence rate has doubled over the last 25 years. On a global scale, Singapore's rates of breast cancer measures at one-third of the American and half of the European figures respectively. They are however, one of the highest in most parts of Asia.

<u>Asthma</u> hits slightly less than 5% of the population. One in 5 children 16 years or younger is asthmatic.

4. Import Statistics (in US\$ millions)

		2002	2003	2004
a.	From U.S. (US\$)	44.3	34.1	45.7
b.	From ROW (US\$)	46.7	53.4	56.8

5. Barriers to Market Entry

- a. Regulatory
- b. Duties

Regulatory Environment / Market Access

There are <u>no</u> custom duties on medical devices. A <u>5.0% goods and services tax</u> (GST) is imposed on all goods sold and services provided, locally. Imports are subject to GST, but <u>payments are refundable on re-exports.</u>

In general, medical devices approved for use in the U.S., Europe, Australia and Japan are acceptable when the appropriate certifications are available (eg; U.S.'Certificate to Foreign Government). There is currently NO mandatory product registration for medical devices except for radiation emitting devices and radiosotopes, HIV test kits, contact lens & related solutions and condoms. There is currently in place a voluntary product registration scheme. (www.hsa.gov.sg) - see attached home page

However, the manufacturer or its local authorized representative must ensure that the device or product meets safety, quality and performance requirements before they can be sold in the local market. For example, devices that have FDA 510 (k) / PMA approval/clearance with CFG or CE marking are deemed acceptable as having met these requirements.

Singapore will soon be implementing compulsory registration, licensing and regulation of medical devices and will adhere to international standards (ie; FDA, TGA and CE mark). This is expected to take effect either at the end of 2005 or first half of 2006.

In May 2002, a Global Harmonization Task Force (GHTF) meeting was held in Singapore and its objective was to build a "One System. One World" and to encourage convergence at the global level in the evolution of regulatory systems for medical devices. Recently, Singapore's Health Sciences Authority (HSA) and Australia's Therapeutic Goods Administration of Australia (TGA) signed a Memorandum of Intention of Cooperation, in short, MOI. The establishment of this MOI with the TGA is an important milestone for HSA as it marks its first major collaboration with one of its key counterpart regulatory agencies. It will also undoubtedly enhance the initiatives being taken to harmonize regulatory standards across national boundaries and serve as a model for regulatory coordination in the Asia-Pacific region.

c. Domestic Production

MNCs such as BD and Siemens have manufacturing facilities in Singapore. There are several other local players that manufacture blood bags, blood tubing sets, infusion / transfusion sets.

d. Procurement Practices

e. Distribution Systems

Typical distribution channels are via agents/distributors or a direct presence in country. Examples of these are MNCs who have sales offices or regional headquarters in Singapore. Distribution through agents/distributors is two-tiered. These companies import products directly from foreign manufacturers and supply to end-users. Government and private laboratories prefer to source directly from either local distributors or the companies' sales offices, rather than directly from foreign manufacturers. This ensures that they are accessible to after-sales service and relieves them from the maintenance and repair of equipment.

New-to-market U.S. manufacturers thinking of entering the Singapore and wider Asian markets should consider using a local agent/distributor. This is because the Government of Singapore tenders for purchases are usually only open to suppliers registered with the Central Procurement Services. Tender notices are published (www.gebiz.gov.sg) and only registered suppliers are allowed access to the tender application forms. (which must be purchased)

Private end-users, including research institutions and centers have procurement departments to coordinate all purchases. They also maintain a list of selected distributors whom they call upon regularly. This allows them to streamline their accounts.

Singapore Distribution Agreements and Singapore Role as a Gateway to ASEAN

Agreements between principals (U.S. manufacturers) and agents/distributors are typically from 3-5 years. There is an emphasis towards a long-term view of the market. As the market is relatively small, Singapore firms ask for agreements to be on an exclusive basis and ask to have rights to distributorship for the neighboring markets of Malaysia, Brunei, Philippines, Indonesia and Thailand.

Singapore is considered to be the gateway to ASEAN (Association of South East Asian Nations) and work through either their own offices in these neighboring countries or through a comprehensive network of distributors. U.S. companies usually determine the conditions of the contract based on their own internal corporate stance on such issues. Agent/distributor mark-ups are between 30%-40% and for equipment, they charge an additional 4%-5% of the value of the equipment to cover the cost of spare parts, aftersales service, maintenance and support.

Distributors that distribute products using the retail pharmacy chain channels (specifically those targeting the self-test market) also have to pay "listing fees" for prime retail shelf space. The charges for such listing fees vary and may cost as much as \$30,000. Chain stores with more outlets will charge higher listing fees because of customer reach/coverage in the market.

6. Contact Lists

Our Commercial Service office in Singapore would be pleased to assist you in your efforts to expand into the Singapore and wider ASEAN market. We have various tailored programs to help you identify potential distributors/agents. Please contact us for more information.

Useful Websites

U.S. Commercial Service Contact in Singapore

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Singapore Health Sciences Authority (HSA) – equivalent of the US FDA

- www.hsa.gov.sg

Ministry of Health, Singapore http://www.moh.gov.sg

Pharmaceutical Society of Singapore http://www.pss.org.sg

The Singapore Medical Association http://www.sma.org.sg

Agency for Science and Technology Research (A*STAR)

- www.a-star.gov.sg